

CALL FOR PAPERS

Fuels from fossil and renewable resources consist of complex mixtures of a multitude of chemical species. The variation of composition and properties of fuels poses a challenge to the combustion-based energy conversion and utilization as chemical feedstock. In the meantime, emission during the conversion process of fuels increases the environmental burden. Knowledge of the composition and properties of fuels is critical to the optimization of fuel conversion in clean and value-added ways. This establishes a need for spectroscopic technologies capable of characterizing fuels and monitoring fuel conversion.

The present special issue aims to provide contributions from spectroscopic technologies relating to the characterization of composition of fuels, evaluation of contamination emission, and the monitoring of fuels during thermal, physical, chemical, and biochemical conversion processes. Any developments in the spectroscopic techniques used in the investigation on fossil and renewable fuels are encouraged.

Spectroscopic techniques for the special issue include atomic spectroscopy, molecular spectroscopy, luminescence, laser spectroscopy, nuclear magnetic resonance spectroscopy, mass spectrometry, X-ray photoelectron spectroscopy, and synchrotron radiation.

Potential topics include but are not limited to the following:

- ▶ Novel spectroscopic techniques/instruments for the characterization of fuels
- ▶ Spectroscopic analysis of derivatives or products of fuels through refining, pyrolysis, liquefaction, upgrading, fermentation, and so forth
- ▶ Online spectroscopic characterization or/and monitoring during the process of fuel conversion/processing/combustion
- ▶ Spectroscopic techniques in fuel cells using fuels originated from fossil or renewable resources
- ▶ Environmental effects of emissions and contamination migration/transformation during fuel utilization
- ▶ Analysis of contamination or/and trace elements during the utilization of fuels
- ▶ In-depth interpretation of spectroscopic data

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jspec/sif/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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